## REMARKS

By this Amendment, claims 1 and 11 have been amended, claims 10, 15 and 16 have been canceled, and new claims 17-29 have been added to the application. Accordingly, claims 1-9, 11-14 and 17-29 are pending in the application. No new matter has been added.

In the prior Office Action, prosecution of the application was reopened in view of the Appeal Brief filed on May 3, 2007. The Examiner rejected claim 16 under 35 U.S.C. §102(b) as being anticipated by Sievers et al., U.S. Pat. 5,639,441. In addition, the Examiner rejected claims 10 and 15 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Sievers et al. By this Amendment "B", claims 10, 15 and 16 have been cancelled thereby rendering the prior rejection thereof moot.

Also in the prior Office Action, the Examiner rejected claims 1-15 under 35 U.S.C. §103(a) as being unpatentable over Sievers et al. and, if necessary, further in view of by a publication entitled "Introduction to Supercritical Fluids", which was apparently retrieved from http://www.criticalprocesses.com/SCFmore.html by the Examiner on July 6, 2007 and/or the publication "Supercritical Fluid", which was apparently retrieved from http://en.wikipedia.org/wiki/Supercritical_fluid by the Examiner on July 5, 2007. In view of the amendments made to claims 1 and 11 herein, applicants respectfully request reconsideration of the claim rejections.

As noted in the prior Appeal Brief, Sievers et al., discloses a method for forming a gas-borne dispersion of fine particles of a desired substance that involves: (a) substantially dissolving or suspending the desired substance in a first nongaseous fluid to form a first solution or suspension; (b) mixing the first solution or suspension with a second nongaseous fluid to form a composition comprising the substance and an immiscible mixture of the first and second nongaseous fluids; and (c) rapidly reducing the pressure on the composition whereby at least one of the nongaseous fluids forms a gas, and whereby a gas-borne dispersion of fine particles of the substance is formed (see col. 4, line 61 to col. 5, line 7).

Claim 1 of the present application requires the presence of:

(I) a supercritical fluid;
(II) a first solvent that is soluble in the supercritical fluid;
(III) a second solvent that is substantially insoluble in the supercritical fluid and is at least partially soluble in or miscible with the first solvent; and
(IV) a solute that is soluble in the first solvent and is substantially insoluble in the second solvent and the supercritical fluid.

Claim 1 of the present invention further requires that the first solvent (II), the second solvent (III) and the solute (IV) be contacted together to form a solution (II + III + IV). Claim 1 further requires that the solution (II + III + IV) be contacted with the supercritical fluid (I), which extracts the first solvent (II) from the solution (II + III + IV) thereby causing the solute (IV) to precipitate in the form of particles that become suspended in the second solvent (III + IV). Lastly, claim 1 of the present invention requires that the solute particles suspended in the second solvent (III + IV) be separated from the first solvent that is dissolved in the supercritical fluid (I + II) when the supercritical fluid (I) is in a supercritical state. Sievers et al. clearly does not disclose, teach or suggest such a process.

By this Amendment, applicant has further amended claim 1 to clarify the means by which the particulate suspension is separated from the first solvent. Claim 1 now specifies that the particulate suspension is separated from the first solvent by:

flowing the first solvent out of the extraction chamber with the supercritical fluid while maintaining the supercritical fluid in a supercritical state,
separately flowing the particulate suspension out of the extraction chamber and into a collection vessel,
isolating the collection vessel from the extraction chamber, and
draining the collection vessel to yield the particulate suspension.

The separation method is expressly disclosed in paragraphs [0034] to [0036] of applicants' specification.

In the prior Office Action, the Examiner contends that since Sievers et al. states that both the first fluid and the second fluid could be supercritical fluids (see col. 6, lines 49-52), and because Sievers teaches that only one of the first fluid or the second fluid needs to pass into a gaseous state (see col. 6, lines 17-2), Sievers et al. anticipates applicants' invention because one of the supercritical fluids could remain in a supercritical state when particle formation occurs. But this reasoning is flawed.

If, as argued by the Examiner, one of skill in the art was motivated by Sievers et al. to mix a desired substance with two immiscible supercritical fluids to form a composition, and then rapidly reduce the pressure on the composition such that one of the two supercritical fluids became gaseous and formed a gas-borne dispersion of the desired substance suspended in the other supercritical fluid which remained in a supercritical state, such process would not read on applicants' method as claimed in claim 1. The result produced by such a method would be a gas-borne dispersion of the desired substance suspended in the still supercritical fluid, but such a process would not include a step of separating a solvent that is soluble in the supercritical fluid from the particle suspension while the supercritical fluid that extracted the solvent was in a supercritical state. Furthermore, it would not involve the separation method now claimed in claim 1.

This can be explained with greater clarity using the same symbols as used above to describe the essential four components of applicants' method as claimed in claim 1. If Sievers et al. is read as argued by the Examiner, one would form a composition comprising an immiscible mixture of a first supercritical fluid (I), a second supercritical fluid (III) and a desired substance (IV). The second supercritical fluid (III) in the Examiner's proposed process according to Sievers et al. would have to correspond to applicants' second solvent (III) inasmuch as applicants' second solvent (III) and the second supercritical fluid (III) according to the process according to Sievers et al. must be immiscible with the first supercritical fluid (I). In order to include a first solvent (II) in the composition according to Sievers et al., one of skill in the art would have had to be motivated to include an additional solvent in the composition. Applicants note that

Sievers et al. does state that the first and second fluids may contain co-solvents and antisolvents (see col. 6, lines 53-54). However, even if one were motivated to include a co-solvent or antisolvent that could correspond to applicants' first solvent (II), Sievers et al. would not read on applicants' method as claimed in claim 1 because Sievers et al. does not teach that such co-solvent or antisolvent should be separated from a suspension of the desired substance in the second supercritical fluid (III + IV) while the first supercritical fluid (I) is in a supercritical state. No matter how far the teachings of Sievers et al. are stretched beyond their intended scope by the Examiner, Sievers et al. simply cannot be fairly read to anticipate the method as claimed in claim 1.

Claim 11 has been amended to include the same separation method steps as now included in claim 1, namely:

> flowing the organic solvent out of the extraction chamber with the supercritical carbon dioxide while maintaining the supercritical carbon dioxide in a supercritical state,
>
> separately flowing the aqueous particulate suspension out of the extraction chamber and into a collection vessel,
>
> isolating the collection vessel from the extraction chamber, and
>
> draining the collection vessel to yield the aqueous particulate suspension.

Claim 11 is clearly patentable over Sievers et al. (and the secondary references to the extent they can lawfully be considered). Claims 2-9 and 12-14 depend from claims 1 and 11, respectively, and are also patentable over such applied references.

New claims 17-29 claim the second separation method disclosed in the specification at paragraphs [0034], [0035] and [0037]. In this separation method, the particulate suspension remains in the extraction chamber while the first solvent is flowed out with the supercritical fluid, which is maintained in a supercritical state. Once the first solvent is removed from the extraction chamber, the extraction chamber is depressurized to yield the particulate suspension.

Again, this is not fairly disclosed taught or suggested by Sievers et al. (and/or the secondary references applied by the Examiner to the extent they can lawfully be

considered). Sievers et al. expressly teaches that one of the fluids must be permitted to rapidly and explosively expand into a gas thereby forming a gas borne dispersion of particles. Sievers et al. does not teach removing one of the components, namely the first solvent, from a pressurized extraction chamber together with supercritical fluid maintained in a supercritical state to yield a particulate suspension. New claims 17-29 thus are patentable over Sievers et al.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge the same to Deposit Account No. 18-0160, Order No. FER-14668.001.

Respectfully submitted,

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